THE INDIANA

FARMER & GARDENER.

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TERMS.—The FARMER AND GARDENER is published *semi-monthly*, each number containing 16 royal octavo pages, at *One Dollar* per annum per copy; *Seventy-five Cents* per copy for Four and less than Ten copies; and *Fifty Cents* per copy for Ten or more copies to the same Post Office. All subscriptions IN ADVANCE.

INDIANA FARMER & GARDENER.

Indianapolis, Saturday, May 3, 1845.

Our Exchange List.

(*Continued.*)

6. AMERICAN AGRICULTURIST.—This standard monthly is published in New York City, and edited by A. B. Allen, who employs a vigorous pen, and who avers that he can handle a plow better yet. This is unquestionably high up among the very first agricultural papers in the Union. Its position, in the midst of splendid farms, extensive orchards, gardens—commercial or private—of the most perfect kind, gives it rare facilities, which are well improved. We seldom receive a number without marking much to be used hereafter.

7. FARMERS' CABINET, *Philadelphia.*—A uniformly excellent monthly; to be *studied* as well as *read*. Its judicious editor, Mr. Tatum, is, we believe, a Friend, and evinces the unbustling, quiet, efficient good sense which we always expect to find in a Quaker. We are indebted to this class of men for some of the finest farming counties in Indiana; and, almost universally, they take agricultural papers; and we point to the Friends as an unanswerable reply to all who grumble at book farming—the best *class* of farmers *do* take, read, and write for agricultural journals. The Farmers' Cabinet contains an unusually large amount of European matter, and of a very useful kind.

8. THE SOUTHERN PLANTER, *Edited by C. T. Botts, Richmond, Va.*—A very good monthly, beautifully printed, and well suited, we should judge, to the wants of the region for which it is designed. Every section shou'd have its *own* journal. A southern agricultural paper, published in New York or Boston, always seemed to us a little out of place. For, although in all tillage, northern or southern, there is much in common, yet there is so much that is diverse as to justify and require a paper which shall be the exponant of the agriculture of each latitude and each longitude.

9. GENESEE FARMER.—This is a monthly of sixteen pages at fifty cents, and worth twice as much. *Our* readers will perceive, that friend Noel gives them *thirty-two pages* monthly for the same price. However, the contents determine the value of a paper, and we are too modest to say a word more. Dr. Lee, of Buffalo, a name mentioned with constant commendation in eastern papers, is the editor. There is a Horticultural Department ably edited by P. Barry, of whom we know only that he talks like a book.

10. MASSACHUSETTS PLOWMAN.—This valuable weekly has just come to hand. Like the Boston Cultivator, Maine Farmer, &c., it devotes one side to pure agriculture, and the residue of the sheet is mixed—being, to all intents and purposes, a newspaper. The articles which the Editor, Mr. Buckminster, writes *on purpose*, are seldom permitted to rest without making the tour of all the agricultural papers of the country. After reading for some years the Boston agricultural papers we have concluded, that they have a very *keen* set of editors to manage them. Some of them are quite combative; and every little while down comes one of them plump upon the rest; and then, some, cautiously conservative and safe, conciliate and "claw off," others show fight; and once in a while, we believe, they have quite a *warm spell* among them.

Having transacted our eastern business, we are now to travel westward, and we first meet the:

11. WESTERN RESERVE MAGAZINE *of Agriculture and Horticulture*, from which we copied into our last paper

a noble article from the pen of Dr. Kirtland, on the subject of orcharding—*and gave no credit for it*, which was wrong, and for which no reason can be given, except that, probably, the interminable length of its name alarmed the compositor. This is a 'bran new' work, and if conducted throughout with the same ability manifested in the first number it will be among the very first journals of the land. Nothing has come to hand for a long time which, on the whole, has pleased us better. Indeed, we never saw an article from Dr. Kirtland which was not well done, and we have quite a desire to *see him*. It is edited by F. R. Elliott, and published at Cleaveland, Ohio, and the Western Reserve does not deserve a paper if it permits this to go unsupported.

12. OHIO CULTIVATOR.—We have already noticed this excellent paper, published at Columbus, Ohio, and we are glad to perceive so goodly a number of able correspondents enlisted. Mr. Bateham, the *single*-handed editor, who is, we believe, a *bachelor* of arts, has also opened a seed store, much seemingly to his own satisfaction. It is the invariable tendency of old bachelors to grow *seedy*.

13. WESTERN FARMER AND GARDENER—for which, as being our prototype, we feel great affection. It is the most elegantly gotten up journal in the country, except Hovey's Magazine. The agricultural department is tilled by Mr. Hooper, and the Horticultural by Mr. Elliott, both of them practical, every day laborers in the departments about which they write. The Jews never waited for the feast of a new moon, more impatiently than we do, for the opening month, to see what the Western Farmer and Gardener 'says'—and we can say, in all truth, that every man who wishes to know, from original sources, the best news incident to Western Horticulture should take, read, and pay for, the Western Farmer and Gardener.

14. The MICHIGAN FARMER, published at Jackson and edited by Mr. Hurlbut, is a valuable farming journal, containing much original matter relating to the staple crops of Michigan, and useful to farmers. It ought to be well supported, and, as it has come out in a new suit of clothes, we suppose that it *is*.

15. The PRAIRIE FARMER has a 'local habitation and a *name*,' a name earned by working by the month; at first for small wages, but now, we believe, for a very pretty compensation. It is a paper worthy of our pride as western men; and it can afford, surely, not to be afraid of any new papers which may be started. We always wondered at its fears. Why, friends Wight & Wright, (a queer yokeful of names,) a man who had 'entered' all Grand Prairie might just as reasonably fear being crowded out by one poor emigrant who takes up only a quarter section.

16. WESTERN CULTIVATOR—published right alongside of us by W. Thompson Hatch. And although friend Hatch felt a little 'riled' at first, to see the Indiana Farmer and Gardener, he has got over it now, and we jog along together in the quietest way possible—and why not? He is getting subscribers enough to make him prosperous, and so are we; and good company usually makes men good natured.

17. INDIANA CULTIVATOR.—Well done Indiana!—Three agricultural papers! This last born son, in that most prolific of all families—the Cultivators—saw the light first at Evansville, a few weeks since. The reasons given for a paper in Southern Indiana are good, and we cordially wish it success. If it will rip up the turf on the old farms in the "Pocket"—rouse up the farmers to quit scratching the soil, and to plow *deep*—till thoroughly—raise a good deal of fruit, of the best kinds—take a paper, pay for it in advance, and communicate to it an account of every thing remarkable in their experience each year—if the Indiana Cultivator will undertake this for the "Pocket," with courage and perseverance, we will give up the ground cheerfully, (especially as we have never been on it,) and push our team in other directions. Take heart, friend ——, whatever your name may be—"faint heart never won fair lady," which is, freely translated, No agricultural paper ever got a good subscription list that did not heartily work for it.

We have now finished our list of exchanges, and, in conclusion, we say, after some acquaintance with papers of all sorts, religious, literary and scientific, that we do not believe an equal number of papers can be found in any one department, which will, in ability, variety of matter, instructiveness, and amount of solid, judicious, practical reading, surpass, if they equal, the Agricultural and Horticultural Journals of the United States.

The Flower Garden.

Spring-Flowering Bulbs.—Crocus, Hyacinths, Narcissus, Tulips will now have done flowering. Let the seed stalks be cut down, as the ripening of the seed severely taxes and exhausts the powers of a plant. Some persons are accustomed, after the bulbs have flowered, to cut off the tops, as if to do the most mischief possible. The success of the next year's flowering will depend very much on the care given to your beds now. Many bulbs, as the tulip, form entirely new bulbs; and others, as the hyacinth, form the flower bud for the next season. The *leaf* is the indispensable means of doing this; in it are perfected the juices which are returned and deposited in the root. If the bed is left to be choked with weeds, and your bulbs robbed of nutriment, or if the soil is left compact, or if there is too much moisture, or, on the other hand, too little, the bud or bulb for the next year will be weakened. A very deep bed, or a sandy soil, will sufficiently prevent the effects of too much water. The surface should be mellowed by the hand, and thoroughly

weeded. The *most* careful cultivators raise their bulbs every year. The *careful* at least every third year. The *careless* let them alone and wonder, from year to year, why their bulbs do so poorly—"the moles must eat them, or worms probably injure them;" but the worst worm in a flower-garden is careless indolence. When bulbs are raised, it should not be done until the leaves are dry. All tender summer, or autumn-flowering bulbs may be now planted out.

Gladiolus.—We are surprised that this fine soldier-like plant is not more extensively employed to adorn gardens, yards, and lawns. A few varieties only are found in our gardens. Great attention has been given in Europe, especially in Belgium, to raising new varieties, and many magnificent kinds are now found in European collections which, so far as we know, are not to be had for love or money in America.—The bulb, or rather corm,* increases very rapidly, and by a little attention one may obtain from a few, a very large supply.—They may be planted with good effect in rows, in clumps, and in beds, but not singly. A sandy loam, well mixed with leaf-mould, is their delight. We usually remove the top soil, and then take out and reject about twelve inches of the sub-soil, making, in all, about twenty inches depth; return the top earth, together with enough compost of leaf-mould, sand, and thoroughly decayed manure, to fill it; plant about four inches deep, measuring from the top of the corm.—When your plants are growing, examine every day; if you see a sawdust-like matter about them, they need attention. On searching a perforation will be found in the stem. With a penknife slit the stem down from the hole until you reach the worm which caused the mischief. If this course is not promptly pursued you will lose both stem and root. With a thin strip of bass matting, or a bit of green ribbon, the stem may be tied and fastened to a rod for support. In door yards, and in the scanty grounds of city yards, clumps of ten or fifteen gladioli would have a very beautiful appearance, especially if different varieties, instead of being mixed, should be planted in separate but contiguous patches.

Tuberose.—The beauty of its pure white florets, but especially the delightful odor of this fragrant flower, has rendered it a favorite wherever it is known. It is very tender to frost, and must not be planted out until about the first of May. It is to be treated like the gladiolus. Its effect is heightened by being put in a half shade, where its pure white is relieved by a green background. The flower stem rises from two to three feet and requires a rod to sustain it. The fragrance is so powerful that a few plants, will, at evening, scent a whole garden; a circumstance well known to owners of pleasure gardens, who render their grounds very delightful by dispersing these, and other odoriferous flowers, in various parts of their grounds, thus loading the dewy evening air with delicious perfume. They may be planted in ten inch pots and sunk in the ground until they have begun to blossom, when the pots may be raised and conveyed to the parlor or verandah. A single plant will sometimes make a room disagreeable by its excessive odor.

The roots are imported to England from Italy, as that climate is too humid and cool to perfect them for flowering. But, in our soil and climate, we have found no difficulty in raising, from off-setts, the finest possible bulbs. No yard or garden should be without tuberoses.

Plants in Pots. It is better, when one has ground at hand, to turn out plants which have been housed through the winter into the open garden. Roses, geraniums, azaleas, cape jessamines, fuchsias, &c., will be wonderfully invigorated by such treatment. The tea and Bengal roses can hardly be brought to perfection in pots, and those who have only seen the penurious growth and diminish-

*Bulbs are of two kinds: those which have a number of coats, or skins, one within the other, like the hyacinth, which are called tunicated bulbs; those which consist of a number of scales, only attached to the base, like the lily; but what are called corms, are only a solid mass of feculent matter, and which modern botanists do not allow to be bulbs, but call underground stems. Corms do not require taking up so often as bulbs; and when they are intended to remain for several years in the ground, they should be planted from four to six inches deep at first; as every year a new corm will form above the old one; and thus, if planted too near the surface, the corm, in a few years, will be pushed out of the ground.—*London.*

ed and sparse blossoms in the parlor have no idea of the beauty of these roses. We usually excavate a place two feet square, and two feet deep for each rose, filling it with sandy loam very highly enriched with leaf-mould and decayed manure. The trouble will be repaid four-fold; for nature has never made a plant that forgets to be grateful for attention.

In turning out plants, put the left hand in such a way upon the top as that the stem shall come between the second and third finger, then invert the pot and give the bottom of it two or three sharp raps, when the pot will come off. If the plant is in a lively, growing state, and the out side of the ball of earth is covered with fine, white, new roots, it will be best to put the ball into the ground without disturbing the roots at all. But if the plant is not growing, the earth may be carefully worked out from the roots with the hands, taking care to break the fibres as little as possible. Spread out the roots as much as possible in every direction, and cover with fine earth.

Directions will be given at the proper season for taking up and repotting plants for winter parlor use.

Rose bushes will need attention, as worms and bugs have begun their depredations. When the number of bushes is limited, hand-picking every day or two is best. For a large collection one must resort to more general methods. Drench your shrubs, which aphides and worms infest, with soapsuds, made of two pounds of *whale-oil* soap to fifteen gallons of water. This is by far the most efficacious—the *only* efficacious course for destroying insects.

As flower seeds come up, see that they are well weeded, and if crowded, thin them out. We would recommend the cultivation of some old-fashioned flowers. Nothing is more showy than a bed of poppies of mixed colors. Holyhocks are becoming very great favorites, and we saw at Mr. Hoffner's, near Cincinnati, last summer, flowers as magnificent, and as well worth having, as any dahlia. The varieties of lupine should be sought for, and for those who have seen nothing but the white and blue lupines we make an extract from Mrs. Loudon's Companion to the Flower Garden—an admirable work, which, through professedly written for ladies, may be used with profit by every body who cultivates a garden.

"LUPINUS.—*Leguminosæ*.—The Lupine. A genus of herbaceous annuals and perennials which contains some of our most beautiful border flowers: yellow, blue, white, and pink lupines are among the oldest border annuals; *L. nanus* is a beautiful little annual, with dark blue flowers, a native of California, and requiring the usual treatment of California annuals. *L. mutabilis* and *Cruickshankii* are splendid plants, growing to the height of four or five feet, and branching like miniature trees. *L. polyphyllus* and its varieties are perennials, and they are splendid and vigorous growing plants, with spikes of flowers from one foot to eighteen inches in length; *L. nootkatensis* is a handsome dwarf perennial, and *L. arboreus* when trained against a wall will attain six feet in height, and in sheltered situations it will grow with equal vigor trained as a bush tied to a stake; *L. latifolius* is a perennial from California, with very long spikes of blue flowers. All the species will thrive in common garden soil; the annuals are propagated by seeds sown in February or March, and the perennials by division of the roots."

Useful Receipts.

There is a great fashion, now-a-days, in all papers, to set forth useful receipts for every imaginable purpose. Every newspaper has its weekly budget of receipts. Our magazines have a page of original receipts; and, before long, why should not the North American Review, or the Edinburgh Review come out with their quarterly bill of fare receipted in full? So practical is our nineteenth century, that our literary men and women feel it to be a solemn duty to indite novel recipts for cooking, seasoning, removing stains, curing diseases, &c.; and why not? If one can invent a sonnet, an elegy, or worse yet a poem, and thus draw people's brains a wool-gathering in the regions of imagination, ought they not to atone for their license by an invention equally substantial for the body? Miss Leslie writes a beautiful story, and a receipt for manipulating lobsters. Miss Martineau writes travels, political economies and suggestions on plum puddings. Mrs. Sigourney tunes her lyre with a hand most redolent of pies, cakes and gingerbread. Such is the aspect of culinary affairs, and the rights of women, that the day seems at hand when no learning will sustain a man, and no accomplishments a woman, who do not understand the art and mystery of cooking. It will be the duty of some future Heyne to give accurate receipts

for all the feasts of Homer's heros, the ingredients of all the Horacian drinking bouts—the dishes of Virgil's fine fellows, as well as the minor matters of armor, language, manners and customs; and a good Lexicon, Hebrew, Greek, or Latin, must contain clearly written receipts for all the dishes used by the people whose language it sets forth. We have been led into this grand prairie of reflections by a receipt found in the Dem. Pharos, which unquestionably is *salty*.

"INDIAN BAKED PUDDING.—Indian pudding is good and wholesome baked. Scald a quart of milk, and stir in seven table spoonsful of salt, a tea-cupful of molasses, and a great spoonful of ginger, or sifted cinnamon. Bake three or four hours. If you want whey you must be sure and pour in a little cold milk, after it is all mixed. Try it."

If Misses Leslie, Childs, &c., refuse to mother such a receipt, with *no* indian meal in it, but *seven* mortal spoonsful of salt, then we will consider it as emanating from Lot's wife. We are sure if one should eat many such puddings, he would speedily come to her estate.

Celery.

We know of no vegetable which requires more care and skill in its cultivation, from beginning to end, than celery. An inexperienced hand will be apt to fail in planting his seed, fail in preparing the trenches, and fail in earthing up the plants and bleaching them. And yet, celery is so generally a favorite that every family desires it, and every gardner is willing to cultivate it.

Seed Sowing. The seed is exceedingly slow in germination, and, if not assisted artificially, will lie three and sometimes four weeks without sprouting. We soak the seed in water, (a solution of oxalic acid would be much better,) for twenty-four hours: turn off the water, and then add and stir up a few handfulls of sand, well moistened, and let the seed stand in a stove room, or other warm place, for two or three days. The sand will now be nearly dry; if it be not, add dry sand to it until it is perfectly powdery, and can be sown without falling in lumps. Besides hastening its germination, mixing the seed with sand enables the operator to sow it with greater facility and evenness. Select a *shaded* spot, let the earth be rich, rather inclined to moisture, and perfectly mellow. Sow the seed broad cast, and cover *very thinly* by sifting over it finely pulverised mould. Beat the bed gently with the back of the spade to settle the earth firmly about the seed. Don't fear that the seed will be troubled by beating; every seed should have the earth pressed to it by a smart stroke of the hoe, hand, spade, or by the pressure of a roller. If the weather is exceedingly warm and dry, cover your seed bed with matting or old carpet, to retain the moisture. When up let them be well weeded, until they are six inches high, when they are to be removed to the trench for blanching.

First Transplanting. The process here detailed may be wholly omitted by those who are *obliged* to economize time and labor. But those who wish to do the very best that can be done—who wish to avoid spindling, weak plants, and secure strong and vigorous ones—transplant their celery to a level bed of very rich soil, placing the plants four inches apart every way. They are cultivated here for about five weeks, when they will have attained a robust habit, or, technically, they will have became *stocky*—for which purpose they were thus transplanted.

Celery Trenches. Dig your trenches about eighteen inches wide, and one foot deep, laying a shovel full of dirt alternately on each side of the trench, that it may be conveniently drawn in on both sides when you *earth up*. If you are favored with a very deep and rich, loamy soil, such as often abounds in Western gardens, you will need little or no manure. But usually about four inches of *vegetable mould* and very *thoroughly rotted* manure, should be placed in the bottom of the trench and gently spaded in. No part of the culture is more critical than manuring. If the soil is slow, poor, and stingy, the celery will be dwarfish, tough and strong. On the other hand, if you employ new, rank, fiery manure, although you will have a vigorous growth, the stalks will be hollow, watery, coarse and flavorless. Let the manure be very thoroughly decayed and mixed half and half with leaf or vegetable mould.

Set the plants five inches apart, water them freely with a fine rosed watering pot,

and, if the sun is fierce, cover the trenches daily from ten till evening with boards. In about a week they will begin to grow and will need no more shading.

Let them alone, except to weed, until the plants are from twelve to fifteen inches high —at which time they are to be earthed up.

Earthing up. In dry weather, with a short, hand-hoe, draw in the earth gently from each side and bring it up carefully to the stalk. The soil must be kept *out of the* plant, and it is best for the first and perhaps the second time of earthing, to gather up the leaves in the left hand, and holding them together to draw the earth about them. Fill in about once in two weeks, and *always when the plants are dry.* When the trench is full, the process is still to go on, and at the close of the season your plants will be exactly reversed—instead of standing in a trench they will top out from a high ridge.

Saving Celery in Winter. Three ways may be mentioned. Letting it stand in the trench—in which case it should be covered with long straw and boards so laid over it that it will be protected from the *wet*, which is supposed to be more prejudicial to it than mere cold.

The Boston market gardeners dig it late in autumn, trim off the fibrous roots, cut off the top, lay it for two days in an airy shed, turning it, say, twice a day, and then pack it in layers of perfectly *dry* sand, in a barrel. After lying two days to air it goes into the barrel much wilted, but regains its plumpness, and comes out as fresh as from the trench.

Lastly, it may be put in rows on the cellar bottom, without trimming, and earth heaped up about it. Set a plank at an angle of 45° and bank up the earth against it, set a row of roots and cover them with dirt, then another row and so on.

Solid celery is not a particular variety—any celery is solid when properly grown—and if grown too rankly the most *solid* celery in the world will be hollow.

We have seen it recommended to water the trenches once or twice during the season with a weak brine of salt and water. Besides the fertilizing effect of salt, it will have the effect of retaining moisture in the soil, and what is of yet more moment, it destroys the parasitical fungus (*Puccinca Heraclèi*) which attacks and rusts the plant, and probably would, also, guard it against a maggot which is apt to infest and very much injure it. There is an insect which, in very dry weather, is apt to sting the leaf and cause it to wilt. While the dew is on in the morning sift lime over the plants, once or twice, and it will check the fly.

If any think these directions too minute and the process vexatious they are at liberty to try a cheaper method—and may, once in a while, succeed. But a certain crop, year by year, cannot be expected without exact and very careful cultivation. We have learned this by sorrowful experience.

The main crop of celery need not be placed in the trenches until the middle of July or the first of August. It's greatest growth will be in the fall months.

Cause of Death.

Dr. P. D. Badger, of Peterborough, N. H. has published some statements of facts, which in his judgment go to show that to lodge in a newly painted house is hazardous to life. He mentions the death of his wife and the certainly approaching death of his child; also the death of one of his children two years old; and several other cases of death—which, he says, might be greatly multiplied—all occurring, apparently, in consequence of living in houses immediately after being painted. The disease engendered was upon the lungs.

Bees.

Dr. Waterman gives, in the Cleveland Herald, his mode of catching the bee miller or moth. He says: "I took too white dishes, (I think white attracts their attention in the night,) or deep plates, and placed them on the top of the hives, and filled them about full of sweetened vinegar. The next morning I had about fifty millers caught; the second night I caught fifty more; the third night, being cold, I did not get any; the fourth night, being warm, I caught about four hundred.

There are two eventful periods in the life of a woman: one, when she wonders who she shall have—the other, when she wonders who will have her.

The first step a man makes towards being good, is to know he is not so already.

ORIGINAL CORRESPONDENCE.

Longworth's Ohio Grape, etc.

In our last, we gave an account of a Herbemont grape at Madison, Ia., supposed to be identical with Longworth's Ohio. We have received, from Mr. Longworth, a statement which puts all aback again. We have both grapes in our garden, and hope to be able to compare them the ensuing season.

To the Editor of the Indiana Farmer and Gardener.

CINCINNATI, April 25th, 1845.

Dear Sir:—Your correspondent, Mr. Morrison, is in error in supposing the Ohio Grape, and Mr. Fizhugh's Herbemont, the same. The latter grape, I obtained from Mr. Herbemont many years since, with samples of his wine, which were not good. Mr. Fitzhugh of Madison, sent me a sample of wine made by him from this grape, of fine quality, and greatly superior to the samples of Mr. Herbemont, and satisfied me, that our climate was more suitable for the cultivation of the grape, than South Carolina. The sample of the Herbemont sent by Mr. Fitzhugh was examined by the Society, and pronounced the Herbemont Madeira. It is a fine table grape, entirely free from the hard pulp common to most American grapes, and superior for wine to the Ohio grape, but the bunches are much smaller. The Ohio grape has borne well with me, in my garden, but at my vineyards, in the High Hills, it bears badly. I have never seen it injured by frost. An account was published a few years since of upwards of three thousand gallons of wine to the acre, made by Herbemont, from his grape. Such statements are ridiculous. He had four or five vines that covered his house and porches. The stalks covered but a few feet of ground, and so measuring, he had more than 3,000 gallons to the acre. In his vineyard, he never raised 200 gallons on an acre. The Catawba grape, is a good table grape, though not entirely free from a hard pulp; but as a wine grape, in our climate, I consider it superior to all others; capable of making a wine to rival the best Hock, and Champaign wines, and that Major Adlum in introducing it, has left a mine of wealth to the people of the Ohio.

I make this remark, as a gentleman from the East observed to me a few days since, that it was understood I gave the preference to the Isabella. The latter grape succeeds better [at the east] than with us. I deem it a poor table grape, and worthless for wine, and have extirpated it from all my vinyards. With two pounds of sugar to the gallon, it makes a pleasant sweet wine.

Yours with regard,

N. LONGWORTH.

Electricity and Vegetation--No. 1.

Even if the public attention had not been turned toward this branch of discovery, by repeated and successful experiment, and if nothing had as yet been discovered by direct examination, of the agency of electricity in vegetable life and growth, it would still be at least, a very plausible theory, that such a connexion did exist, and was actually in operation.

It would be plausible, because, from what has been learned of the nature of this subtlest of all agents, it is adequate to the task of producing a *change* in the matter and organization of compound bodies.

It would be plausible too, because the nature of its action upon the animal organization, (which is well known,) would lead us to infer analogically, a somewhat similar effect upon vegetable life.

But most of all would it be plausible, because no plant, nor root, nor leaf, place it where or how we may, can be withdrawn from the close proximity of electric currents or from their powerful influence, if, in the end, it should be found that such influence is exerted.

From some cause there is a tendency in the course of discovery, to make this agent the ultimate cause of almost all the phenomena, which have heretofore surpassed our comprehension. Its *agency* has been already demonstrated where, but a few years since, its existence was never dreamed of; while all its operations, so essential, and yet so phantomlike—so all-pervading, yet intangible and incomprehensible—come nearer to realizing our conceptions of the *soul of the world*—the vital or organic principle of the creation, than those of any agent with which we are acquainted.

But, to render myself more explicit, and preparatory to an understanding of this subject, it is necessary to mention some elementary principles and definitions.

Analytic chemistry may be properly divided into two branches: Pure or inorganic, and organic chemistry; the distinction being, that one deals with well defined elementary bodies, following them through only two or three combinations. The natural consequence is, that after an *analysis*, it is easy, in pure chemistry, to make a synthesis; for instance, if I have performed an assay of an ore, and from an oxide procured the bright button of the metal itself, it is easy to take those steps right back, and from the pure metal, compound any or all of its ores. In pure inorganic chemistry, if we can tell of what a thing is made up, we can always make it up, and prove the analysis.

But organic chemistry takes substances, which in the curious shop of nature have been modelled after no simple pattern, and, after a long and careful scrutiny can tell, pretty nearly, what they are made of—can get the *proximate elements*, but can go no further. As to compounding them, that is never to be thought of. It will tell you a dozen elements which go to make wheat flour, and their exact proportions; but mix those elements, and they resemble more a mess fresh from the apothecaries, than the sweet, sustaining grain.

It appears to be the case, in our present limited knowledge, that whenever life, vital organization and action have taken hold of simple elements, and held them for a longer or shorter time in combination, there is henceforth an intimacy of blending, an accuracy of proportion, and a subtle, intangible, but essential principle pervading the lump, which brings the most skillful analyst to a dead halt. He can tell that certain substances have entered into copartnership, but he knows not the bond of union.

It is from ignorance of this peculiarity in the composition of organic substances, that has sprung the empyrical methods heretofore pursued in agriculture. Manures have been used, not because they abounded in the desired product, or because they compensated the specific deficiencies of the soil, but because they were "*found to do well.*" And the era, which is now come to the agricultural world is, that hereafter, chemistry shall point out *what* is needed, and practice, *how* and *how much*. For although, as I have said, no knowledge or skill avails to compound *directly* the inimitable productions of the field, yet, if this mass of "proximate principles" be offered to the hand of nature, they are speedily arranged by her discriminating selection.

I wish here to mention a fact, which will be used hereafter, concerning these "proximate principles" of organic bodies. Every vegetable and animal substance, besides the peculiar element which belongs to it, and to it alone, has in its constitution a great amount of absolutely simple inorganic elements, which, although intimately and inimitably combined, are yet subject to the same reactions, and submit to the same agents, that they do when existing separately. Water and carbon are found in almost everything; alkalies, acids and even metals are found curiously blended in different substances; and generally speaking, by far the greater portion of the elements of any organic substance may be obtained and classified as inorganic simples. Now these are absolutely essential to the constitution of the respective substances, and these it is, which are to be afforded by peculiar manures, and be acted on, as I shall show, by the elective and analytic power of an electrical impulse.

In regard to what has been called the vital principle, or that *something*, which so completely characterizes all matter in which it is found, and yet so uniformly eludes our observation, as a distinct principle, I wish to note the striking similarity of all its developements, whether found in the animal or vegetable kingdom.

It is well known, that from the most complete exhibition of vital organization, man, down to the faintest and most obscure, as found in the moss and lichen of northern latitudes, the gradation is so regular, so gradual, that the naturalist's discrimination is often completely outdone by the finer and more subtle distinctions of nature It is, indeed, asserted by some, and not without a high degree of plausibility, that there is a *principle of life* common to all organized substances, varying only in the degree of its developement.

What this mysterious principle is, has as yet been determined by no one; it has been closely imitated, so closely as almost to appear a temporary substitute; but, to permanently replace it, or originally to set it in operation, is a problem still open for solution, and we may add, not without prospect of brilliant success.

Thus much having been premised, let me turn back and marshal a fact or two in order to sustain the assertions made in the commencement of this article.

I have said, that electricity is capable of producing changes in compound bodies—holding a control over chemical affinity more powerful than any other agent with which we are acquainted. Indeed, so pervading is this principle, that not long since the scientific world was divided into two parties, one, headed by no less a name than Sir Humphrey Davy, contending that the true solution of every case of chemical affinity and election is to be found in the *electrical states* of the combining elements; while the other party held on to the old theories of an arbitrary attraction of the particles of matter, each to each, varying only in the intensity with which it acted between different classes of bodies. I will mention only three or four familiar illustrations of the analytic action of electricity out of a multitude of similar cases which might be adduced.

Water, for many years was supposed to be a simple substance; and it was not until the powerful assistance of a galvanic battery was obtained, that it was demonstrated to be a compound of two well known gases—oxygen and hydrogen. Again;

If a lump of pure caustic potash, moist-

ened by a little water, be placed between the poles of a powerful electrical (galvanic) battery, and the experiment be properly conducted, there will appear at one of the poles, a little globule of shining metal, while at the other a quantity of oxygen will be developed; and by this decomposition the lump of potassa, which, until Sir Humphrey Davy's experiments, was supposed to be an elementary body, is shown to be a compound of a metal and oxygen, exactly analogous to the rust taken from a bar of iron. By this experiment, it is seen, that this invisible and intangible agent has performed an analysis, and effected a separation between two elements, which, for years, defied the utmost skill of chemistry; and even after they are thus separated, if the electrical current is stopped, and a drop of water be thrown upon the metal, it will take fire, explode, and become again caustic potassa, so that a pistol primed with a grain of potassium may be fired with an icicle!

Another similar, but more interesting case, is found in what is now called the electrotype process. If a solution of blue vitriol (sulphate of copper) be plentifully poured around a copper plate buried in the ground, and this plate be connected by a wire with a zinc plate of equal size, placed say ten feet off, and this plate be watered with a little dilute acid, the sulphuric acid of the sulphate of copper will leave it, traverse the ten feet of earth, and combine with the zinc; while the pure metalic copper will be precipitated upon the copper plate. This same decomposition would take place even though the two plates were five miles apart, only a longer time would be requisite for its completion.

Modern geologists have seized upon this fact to account for the distribution of metallic veins. Let it only be granted that an electrical current is *established* (which is demonstrable) and experiment proves, that the obedient metals would troop around a common pole of this natural battery, ready for the use of the miner and manufacturer.

There is no end to the experiments which might be detailed, wherein this subtle agent, by various modes of application, is demonstrated to be the most powerful controller of matter with which we are acquainted; every substance acknowledges its supremacy; and yet *itself* is unknown; we know a few results but can tell nothing of the cause.

It is not, then, unreasonable to suppose, that this agent should exercise some influence upon vegetable life, *for it has the power*.

I will postpone till my next a consideration of the two other points mentioned at the commencement of this, I fear, too long article, viz: The effect of electricity upon animal life, or its physiological effects; and the evidence of its all-pervading presence, which renders it impossible to avoid its influence, even though it were noxious and undesirable. F.

For the Indiana Farmer and Gardener.

The Indianapolis Market.

Sometime back, I promised you a few comments on our market, its situation, and character, and the system upon which it is conducted, and to suggest what I think would greatly improve it, and as greatly benefit, both buyer and seller. From some little acquaintance with such matters, in both of those capacities, and from sad experience here, as a dependent upon our market in some respects for supplies for my family, I am well satisfied a change some way or other for the better is greatly needed.

I attended the western market this morning at half past five o'clock, and an account of its situation at that hour, may be edifying to the members of the Corporation.—There were four meat-stalls pretty well supplied—one bag of flour, two hams, one basket of salad, and two empty butter baskets, each closely attended by one man and two dogs; (there may have been one or two extra dogs, of this I can not speak positively.) And this, sir, was the sum and substance of market-folks who came to our Indianapolis market this day *to sell*. There were four men beside myself, who seemed like purchasers; looking, all of us, in hungry despair, at the slim chance for breakfast, yet remaining on the ground, reluctant to leave, and without any apparent object to stay, other than to contemplate the barrenness around us. This is a true picture of our market at that hour this morning; and with a few exceptions, is a fair picture of it almost any morning in the year except whilst our legislature is sitting. Now this state of affairs is abominable and should be changed. That it can be, there can be no doubt. And now I will give you my notions, as to how it should be done. The object of our people should be, so to regulate our public market, as to produce a sufficient supply of marketable goods, at fair prices. This is my groundwork, and upon this basis, and to this end, I propose to build my plan.

We have in our city some four thousand people, who would expect, under a well regulated and well operating system, to resort to the market houses for most of their supplies for housekeeping. At present, not the one-tenth part of them do so, and for no other reason, than that it would be wholly unsafe and useless. We have around us, and within a readily accessible distance a great abundance of marketable produce, to furnish our

whole people and to spare. Yet, at present, not the one-thousandth part of it is brought to market, and, for the reason, that there is no certainty that it can be sold if it were brought.

Now, why do not our people, more generally, go to the market house to buy, and our farmers come there to sell? These things are so connected and so dependent one upon the other, that a remedy for one, will cure the other.

The causes are, first—*The exceedingly improper times and hours fixed by law, at which markets are to be held.* If men and women are bound to go to the market house at midnight to buy, or to depend upon other resources for their supplies, they will desert the market house. You cannot force them at unseasonable hours, any more than you can force them to pay unreasonable prices.

Suppose you should pass a law, that our merchants should sell their goods, only between the hours of five and six o'clock in the morning! What would you think of it! Well, your market laws operate just so. Every market-man strives to be present at the opening hours to have the first sales, and but few are so circumstanced as to be able to do so. Every one thinks if he cannot do so, it is useless to come at all, and for these reasons many stay away.

Think for a moment, then, of the situation of a farmer residing say, four or five miles from town, and desirous, or probably compelled, to attend market, to gather the small gains to be had there. His wife and others of his family, whose duty it may be to prepare his marketing, do not terminate the labor until ten o'clock at night. He is obliged to be at the market house at five or half past five o'clock in the morning. To do this he must start from home at three o'clock, and he will have to bestir himself a half hour at least before that time, to feed his horse and prepare his wagon. At this rate, he can have but about three or four hours rest; and this will not answer for a man laboring as farmers must labor to carry on business properly. Thus by the folly of our law, this man, unwilling or unable to suffer so great inconvenience, does not come to our market house. Now, if such be the result with men within five miles of the town, it is evident that it will be so with those residing at a greater distance. Again, those too early hours are certain to deter many purchasers from attending to buy; and the seller, aware of this fact, comes to the conclusion that the market will be overstocked—that few will turn out at that hour—that he cannot sell if he does come, and therefore stays away, and thereby, in the end, amidst all these conclusions, those who do go to purchase, are subjected to great competition for what does come, and compelled to pay inordinate prices, or on the other hand, find nothing offered for their money. As proof of this, see the price of butter for the last three weeks. Two or three persons more active or acute than the rest, have spent sleepless nights, and attended our *daylight* market with their butter. They have demanded, and in most cases obtained, from fifteen to twenty cents per pound, cash, whilst during the very same time, in almost every store in town, butter was bought and sold at from ten to twelve and a half cents per pound, and no one thought of asking more.

Another reason against good markets is, that there are too many market days. This may at first seem a strange idea, but it is true, and all experience proves it. Sellers cannot be expected to attend market every time it is open, during the week. Once or twice is enough for most market folks.—Each is anxious to go at the best day for prices, each has a different opinion, and comes on a different day. Purchasers seeing this cross-firing, cannot calculate with any certainty, when the things they want will be brought in; they do not know when to attend—cannot go to every market or do not wish to, and confusion is thus created on both hands.

Now, reduce the number of market days, and you decrease the difficulty.

These, and some other causes, which I will advert to hereafter, constitute the evils of our public markets.

For remedy, let us change the hours and times of opening our markets.

Let the morning markets from the first of April to the first of October open at half past six, or at seven o'clock, and the remainder of the year at eight o'clock. This will give to market people time to come to town in daylight, and enable all purchasers to attend. Let us have an afternoon market on Saturdays and Wednesdays, to open at one or two o'clock, to suit more distant farmers, who now do not come at all. This system has never failed when it has been tried, and I think will not fail if tried here. These afternoon markets, in most places, become matters of great importance to town and country. They are made marts for the sale and purchase of almost every saleable kind of property, and like the old *fairs* of England, are thronged with the people for miles around them. There are very many reasons in their favor, some of them I will trouble you with hereafter.

A Market-man.

Good courage breaks ill luck to pieces.

To the Editor of the Indiana Farmer and Gardener.

EVANSVILLE, April 22d, 1845.

Dear Sir:—Permit me to excuse my neglect in not sending you a copy of the Minutes of the meeting organizing the Agricultural Society of Vanderburgh County, at an earlier moment, by stating it would have been done, but that I have been out of town nearly the whole of the time since said meeting. Very respectfully,

JOHN N. KIKENDALL.

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At a meeting of the citizens of Vanderburgh county, held March 22d, 1845, at the court house in Evansville, in pursuance of a public notice published in the Evansville Courier, three weeks, when were present, Charles I. Battell, H. P. De Bruler, Wm. Newton, Willard Carpenter, Wm. McKnit, John M. Stockwell, Stephen Childs, John N. Kikendall, F. E. Goodsell, Dr. L. L. Lacock, John Echols, Mr. Crisp, John Burbank, Wm. B. Butler, John S. Walker, Mr. Garvin, Edward Hopkins, Gardener Bowles, James Cardson, Thos. Harrison John Nightingale, Robert Nightingale, Dr. J. Burns, Richard Jenkins, Bracket Mills, Aloin B. Carpenter.

Then, upon motion, C. I. Battell, Esq., was duly elected chairman, and John N. Kikendall, Secretary, of said meeting, who were both duly sworn faithfully to discharge their respective duties as Chairman and Secretary of said meeting.

The Chairman then put the question to vote: "Shall the persons composing this meeting, incorporate themselves into an Agricultural Society, under the provisions of the statute in such case made and provided, to be called 'The Agricultural Society of Vanderburgh County?'" Which question, the ayes and noes having been called for, resulted in the following vote:—ayes 21, noes 4.

James T. Walker then moved that the tax on each member for the first year, shall be one dollar; which was agreed to.

It was then resolved, that the meeting go into an election of officers of the Society, and the following persons were chosen: Rev. H. P. De Bruler, President, C. I. Battell, Vice President, John N. Kikendall, Secretary, John M. Stockwell, Treasurer, John Echols, Richard Jinkins, John F. Crisp, Willard Carpenter, F. E. Goodsell, James T. Walker, and George B. Walker, Directors.

Resolved, That the Editor of the Evansville Courier be requested to publish the proceedings of this meeting.

The meeting then adjourned until the first Saturday of May next, at 2 o'clock P. M.

C. I. BATTELL, Ch'n.

JOHN N. KIKENDALL, Sec'ry.

Laporte County Agricultural Society.

Pursuant to notice given, the annual meeting of the "Laporte County Agricultural Society," was held at the Court House on Saturday, April 5th, A. D. 1845, for the purpose of electing officers for the present year.

On motion of G. C. Havens,

Messrs. Samuel Treat, Samuel Stewart, Aquilla W. Rodgers, W. J. Walker, A. Cutler, and A. Northum, were appointed a committee to place in nomination, before the society, candidates for the several offices to be filled.

The committee, after due consideration, reported as follows:

For President, Doct. G. A. ROSE. *Vice Presidents*, A. W. RODGERS, J. HEFNER. *For Secretary*, A. D. TREAT. *Corresponding Secretary*, B. M. NEWKIRK. *Treasurer*, WM. HAWKINS. *Curators*, for Centre Township, S. Treat and B. F. Walker. Michigan, F. Ames and W. J. Walker, Springfield, J. Mason and J. Hazeltine Galena, Joshua Jourdan and W. Goit. Hudson, O. Enos and G. Dwellinger. Wills, H. Huntsman and W. J. Whitehead. Kankakee, A. Blackburn and A. Cutter. Pleasant, G. C. Havens and C. Everhart. Union, J. Shotwell and A. Lathrop. Noble, B. Shaw and A. Northum. Van Buren, W. McClain and John Wills. Clinton, S. Haus and P. Doolittle. New Durham, Isaac Corliss and J. Armstrong. Scipio, W. K. Parker and L. C. Andrew. Cool Spring, A. Stanton and D. Low.

The report being accepted, the Society, by ballot, unanimously confirmed the same; and the persons mentioned in said report were declared duly elected to the several offices designated for them to fill.

On motion of G. C. Havens,

Resolved, That the Board of Managers be requested to meet at as early a day as possible, and prepare a list of premiums to be allowed at the next fair.

On motion of Samuel Stewart,

Resolved, That the constitution of this Society be so amended, that at any regular meeting, notified according to the requirements of this constitution, a majority of the members present, shall be competent to elect officers, and transact all other business before the Society, and that *Curators* may be elected *viva voce*.

On motion,

Resolved, That the proceedings of this meeting be published in the 'Laporte County Whig,' and that the 'Indiana Farmer and Gardener' be requested to copy the same.

On motion, the meeting adjourned.

G. A. ROSE, *Pres't.*

A. W. RODGERS, } Vice Pres'ts.
J. HEFNER, }

A. D. TREAT, Sec'ry.

Application of Chemistry to Agriculture.

You may, perhaps, remember that about three years since, in a communication to your excellent periodical, I stated that I should not be satisfied with chemistry as applied to agriculture, until it had analysed the soil and the crop, and ascertained what the crop had withdrawn from the soil, that the farmer might replace it with the proper quantity of the proper manure—nitrogenous compounds being always wanted besides, to stimulate the active principle of life. And for this purpose, I believe that chemistry, if not yet, will certainly hereafter, be found fully adequate. I therefore think that those who oppose the application of chemistry, even in its present state, to Agriculture, oppose the progress of a science which, ere long, will completely fulfil the most sanguine expectations of its followers.

The English agricultural societies have voted a liberal sum of money for the purpose of analysing the ashes of plants, none of the analysis yet made having been found satisfactory; and those of Sprengel, as Liebig justly observes, being altogether incorrect. In the meantime, however, two German chemists, Messrs. Fresenius and Will, in the laboratory of their great master at Giessen, have undertaken the analyses of the ashes of seeds and plants, and have recently published an account of them, with the methods pursued, and the precautions taken. Some of their observations and results I propose to give, as I find by the last number of your paper, that this information is desired. These gentlemen not only give their own analyses, but those of others recently made, on which they can depend. Among them is an analysis of *maize*, by Letellier, which is as follows—although I must premise that this seed must vary slightly in the results of its analysi, according to the kind used, some having more oil or starch, &c. than others.

Analysis of Maize, by Letellier, at Bechelbronn.

Potash and soda,	30.8 and loss.
Lime,	1.3
Magnesia,	17.0
Phosphoric acid,	50.1
Silica,	0.8
	100.

It is also evident that unless the seeds are ripe, the analysis would be unsatisfactory.

Nature has provided in the seeds of plants, as in the eggs and milk of animals, all the substances which are necessary for the developement of the young individual, so long as it is in itself incapable of seeking sustenance externally. In the ashes of seeds, therefore, we shall find treasured up, and almost pure, the indispensable mineral food of the plant.

The examinations hitherto made of the ashes of seeds, indicate that those of the corn tribe (*cerealia*,) the bean and pea tribe (*leguminosæ*,) the cabbage and turnep tribe (*cruciferæ*,) and among trees of the fir tribe (*coniferæ*,) consist almost entirely of the earthy and alkaline phosphates. They do not effervesce with acids: they contain variable quantities of silica and sulphates, but merely traces of chlorides. The ashes of the seeds of the oak, chestnut, beech, and many other trees, effervesce strongly with acids. Besides phosphates they contain then a considerable quantity of carbonates, which have no doubt resulted from vegetable acids in the seeds. The proportion of chlorides, sulphates and silica, to the other constituents in these ashes, is small. From these facts we conclude that the salts of phosphoric acid are indispensable constituents of the corn tribe, and that the oak, chestnut, &c., require besides, alkalies not united with mineral acids.

The following is the list of *inorganic* compounds or bodies which have hitherto been found in the ashes of vegetables:

Basis.	*Acids or bodies with which the basis form compounds.*
Potash,	Silicic acid, (*Silica*,)
Soda,	Phosphoric acid,
Lime,	Sulphuric acid,
Magnesia,	Carbonic acid,
Peroxide of iron,	Chlorine,
Oxide of manganese,	Iodine,
	Bromine,
	Fluorine.

With the exception of the three last bodies, and the manganese, the above acids and bases are found in various quantities in nearly all vegetable ashes.

It would be misplaced to give here the beautiful processes by which the analyses of these gentlemen were performed: the *results* will, no doubt, be more satisfactory. The first I give are five out of ten specimens of tobacco, grown in Hungary, on land in various districts, which had never been manured, and on which this plant had been some time cultivated. And in these we shall see illustrated the beautiful law of substitution of one base for another, which may be wanting in the soil, as laid down by Liebig. It will be observed that as the quantity of potash decreases, that of lime increases—the former being exhausted out of the soil, is replaced in the plant by the latter, which is in plenty. There is no doubt, however, that this substitution must cause a difference in the quality, and is therefore a subject worth studying by the tobacco planters of this country.

I give only those made after deducting the carbonic acid, the charcoal, and the sand:

Analyses of five specimens of Tobacco.

	No. 1,	2,	3,	4,	5
Potash,	29.08	30.67	27.88	18.20	8.20
Soda,	2.26				
Lime,	27.67	24.79	31.16	27.86	42.77
Magnesia,	7.22	8.57	7.31	15.73	13.93
Chloride sodium,	0 91	5.95	9.34	11.41	3.22
Do. potassium,			4.90	3.92	8.53
Phos. iron,	8.78	6.03	6.39	6.80	6.07
Do. lime,					
Sulph. lime,	6.43	5.60	6.43	10.11	7.96
Silica,	17.65	18.39.	6.59	5.97	9.32
	100.	100.	100.	100.	100.

Analyses of Wheat, Rye, and Peas, deducting the carbonic acid, charcoal, and sand.

	Wheat. Red.	White.	Rye.	Peas.
Potash,	21.87	33.84	32.76	39.51
Soda,	15.75		4.45	3.98
Lime,	1.93	3.09	2.92	5.91
Magnesia,	9.60	13.54	10.13	6.43
Peroxide iron,	1.36	0.31	0.82	1.05
Phosphoric acid,	49.32	49.21	47.29	34.50
Chloride sodium,				3.71
Sulphuric acid,	0.17		1.46	4.91
Silica,			0.17	
	100.	100.	100.	100.

The reason why the charcoal and carbonic acid are left out, although they are given in previous analyses, is, that they may be considered for our purpose as accidental ingredients, inasmuch as in most, the quantity depends on the texture, on the quantity and quality of the basis, they originate in the combustion, and depend much on the degree of heat used. The ashes of seeds, so far as their composition is known, consist, like those of the blood of man and of other animals, chiefly of the phosphates of the alkalies and alkaline earths. The curious fact, moreover, has been lately observed, that the phosphoric acid is not in all seeds combined with the same number of equivalents of fixed bases. The seeds of leguminosæ and the coniferæ, contain tribasic phosphates—(earth of bones is a tribasic phosphate.) The seeds of Cerealia, also buckwheat, hemp and linseed, contain bibasic phosphates. This relation is maintained when seeds are grown in different localities. The quantities of oxygen contained in the bases of these seeds, leaving out the unimportant sulphates and chlorides, are so nearly alike, that it is evident that the law of the substitution of bases applies also to the phosphates.

Analysis of Buckwheat, Barley, Linseed, Oats, and Sainfoin.

	Buck-wheat.	Bar-ley.	Oats.	Lin-seed.	Sain-foin.
Potash,	8.74	3.91	12.9	25.85	6.75
Soda,	20.10	16.79		0.71	20.33
Lime,	6.66	3.36	3.7	25.27	
Magnesia,	10.38	10.05	7.7	0.22	8.57
Perox. iron,	1.05	1.93	1.3	3.67	
Phos. acid,	50.07	40.63	14.9	40.41	54.89*
Sulph. lime,				1.70	2.87
Silica,	0 69	21.99	53.3	0.92	1.10
Sulph. acid,	2.16	0.26	1.0		
Carbon,			4.7		
Chlo. sodium,			0.5	1.55	2.18
Phos. of peroxide of iron,					3.31
Oxygin of the bases,	11.96	11.70	14.95	12.76	

Most respectfully yours,
J. E. TESCHEMACHER.
April 5th, 1845.

N. E. Farmer.

* Phosphate of lime.

To destroy the taste of Leaks or Ramps in Butter.

We are informed by Mr. Dennis Rust, of this place, who has tried the experiment, that one teaspoon full of pulverized saltpetre put into three gallons of milk, will entirely destroy the taste of leaks or ramps. Butter may be purified by the same process.

Laporte Whig.

Culture of Mustard.

Several subscribers have requested an article on the cultivation of mustard. Our own experience in its culture is very limited. Several years ago we raised a small crop, and the method we practiced was as follows: The soil was a sandy loam. The seed was sown in drills, with a turnep drill; the rows about sixteen inches a part. The spaces between the rows were kept clean by the hoe. This was the white mustard. The black variety is larger and requires more room.

Mr. Jas. H. Parmelee, of Duncan's Falls, Ohio, raised last year twenty-seven acres of the black or brown mustard. It appears that it was planted in hills, one foot apart one way and two feet the other; the crop being well worked during the season. The twenty-seven acres produced, by Mr. P's account, four hundred and fifty-seven bushels, or nearly seventeen bushels per acre. It may be sown as soon as the ground is in proper condition to work.—*Albany Cult.*

Let him speak who received, let the giver hold his peace.

TABULAR STATEMENT OF THE CROPS FOR 1844.

State or Territory.	Population in 1840.	Present estimated popu'n.	Wheat.	Barley.	Oats.	Rye.	Buckwheat.	Indian Corn.
			Bushels.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
Maine	501,973	555,525	628,000	260,000	1,422,000	176,000	66,000	1,738,000
New Hampshire	284,574	289,368	588,000	117,000	1,765,000	405,000	147,000	1,662,000
Massachusetts	737,699	803,187	210,000	141,000	1,687,000	660,000	114,000	2,816,000
Rhode Island	108,830	115,033	4,000	49,000	182,000	49,000	4,000	636,000
Connecticut	309,978	316,543	104,600	25,000	1,496,000	1,122,000	404,000	2,408,000
Vermont	291,948	297,166	776,000	49,000	3,266,000	306,000	286,000	1,440,000
New York	2,428,921	2,714,486	14,975,000	2,164,000	31,135,000	4,044,000	2,997,000	19,468,000
New Jersey	373,306	401,295	875,000	10,000	4,271,000	2,569,000	818,000	6,966,000
Pennsylvania	1,724,033	1,924,460	10,483,000	157,000	24,783,000	10,373,000	2,889,000	19,029,000
Delaware	78,085	78,527	367,000	5,000	1,035,000	46,000	12,000	3,014,000
Maryland	470,019	482,256	4,070,000	3,000	2,254,000	858,000	99,000	4,653,000
Virginia	1,239,797	1,254,938	10,805,000	94,000	14,812,000	1,310,000	—	38,960,000
North Carolina	753,419	761,648	2,461,000	4,000	5,346,000	255,000	—	22,330,000
South Carolina	594,398	606,285	1,460,000	4,000	1,400,000	60,000	—	13,640,000
Georgia	691,392	891,642	1,848,000	13,000	1,190,000	80,000	—	22,200,000
Alabama	590,756	657,000	1,088,000	8,000	1,909,000	72,000	—	22,200,000
Mississippi	375,651	556,467	344,000	2,000	1,081,000	20,000	—	2,709,000
Louisiana	352,411	426,160	—	—	138,000	2,000	—	7,600,000
Tennessee	829,210	907,770	6,950,000	5,000	7,841,000	366,000	25,000	61,100,000
Kentucky	779,828	828,846	3,974,000	14,000	11,901,000	2,316,000	13,000	47,500,000
Ohio	1,519,467	1,834,965	15,969,000	191,000	20,393,000	840,000	792,000	48,000,000
Indiana	685,866	868,175	5,419,000	32,000	11,585,000	210,000	66,000	24,500,000
Illinois	476,183	764,809	3,380,000	92,000	10,798,000	136,000	86,000	19,680,000
Missouri	383,102	514,000	1,144,000	10,000	4,555,000	77,000	17,000	12,500,000
Arkansas	97,574	133,403	2,111,000	1,000	396,000	11,000	—	7,500,000
Michigan	212,267	308,437	4,237,000	158,000	4,013,000	70,000	200,000	4,300,000
Florida	54,477	65,005	1,000	—	10,000	—	—	1,100,000
Wisconsin	30,945	52,379	728,000	17,000	1,000,000	4,000	23,000	560,000
Iowa	43,112	90,000	595,000	2,000	568,000	7,000	13,000	1,690,000
District of Columbia	43,712	52,421	13,000	—	15,000	6,000	—	44,000
	17,069,453	19,552,196	95,607,000	3,627,000	172,247,000	26,450,000	9,071,000	421,953,000

TABULAR STATEMENT OF THE CROPS FOR 1844—CONTINUED.

State or Territory.	Potatoes.	Hay.	Flax and Hemp.	Tobacco.	Cotton.	Rice.	Silk.	Sugar.
	Bushels.	*Tons.*	*Tons.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
Maine	12,304,000	1,251,000	—	—	—	—	850	266,000
New Hampshire	4,643,000	657,000	—	—	—	—	1,100	1,928,000
Massachusetts	4,050,000	706,000	—	103,000	—	—	37,690	425,000
Rhode Island	812,000	44,000	—	—	—	—	1,140	
Connecticut	2,117,000	573,000	—	661,000	—	—	176,210	47,000
Vermont	6,158,000	1,266,000	—	—	—	—	10,990	4,383,000
New York	17,703,000	4,938,000	—	—	—	—	6,540	12,135,000
New Jersey	2,067,000	376,000	—	—	—	—	5,200	
Pennsylvania	6,871,000	2,182,000	—	486,000	—	—	33,100	1,313,000
Delaware	194,000	23,000	—	—	—	—	4,580	
Maryland	881,000	80,000	—	15,582,000	6,000	—	8,530	
Virginia	2,374,000	444,000	—	38,574,000	2,683,000	3,000	7,720	1,407,000
North Carolina	3,615,000	134,000	—	466,000	51,628,000	3,823,000	8,050	8,000
South Carolina	3,360,000	31,000	—	53,000	49,700,000	83,616,000	6,930	28,000
Georgia	2,048,000	22,000	—	163,000	213,620,000	17,524,000	7,660	291,000
Alabama	1,923,000	21,000	—	310,000	140,000,000	200,000	7,170	9,000
Mississippi	3,378,000	1,000	—	176,000	195,240,000	1,144,000	270	
Louisiana	1,443,000	33,000	—	—	154,800,000	4,705,000	1,310	160,000,000
Tennessee	2,051,000	52,000	—	33,736,000	39,600,000	10,000	25,090	460,000
Kentucky	1,371,000	164,000	12,000	57,555,000	880,000	19,000	5,810	2,447,000
Ohio	4,847,000	1,876,000	1,000	6,888,000	—	—	31,500	4,380,000
Indiana	3,573,000	2,027,000	500	3,200,000	—	—	1,050	7,365,000
Illinois	3,095,000	350,000	300	1,062,000	250,000	—	4,250	542,000
Missouri	972,000	90,000	9,000	12,495,000	180,000	—	260	396,000
Arkansas	611,000	1,000	—	—	14,400 000	7,000	270	3,000
Michigan	5,359,000	268,000	—	—	—	—	1,730	2,611,000
Florida	300,000	2,000	—	195,000	9,120,000	708,000	510	373,000
Wisconsin	853,000	67,000	—	—	—	—	30	216,000
Iowa	469,000	34,000	—	—	—	—	—	74,000
District of Columbia	51,000	2,000	—	—	—	—	1.250	
	99,493,000	17,715,000	22,800	166,705,000	872,107,000	111,759,000	396,790	201,107,000

Cheese Statistics and Speculations.

We take from the Rochester Democrat the following statistics of one of the staple articles of the country, to which we add some remarks and facts of our own.

A new impetus seems to have been given to the cheese trade, and for a few weeks it has been in great demand for the eastern market. About six weeks since, speculations in the article commenced in Boston, and a few days after, the bulk of the quantity in that city and New York was monopolized by a few dealers. The price going up east, a house in this city went into the market in this section of the State, and bought up nearly all that could be found in this and the adjoining counties, and forwarded it to Boston. What was dull sale at the close of navigation last fall in the eastern cities, at four to five cents, is now in demand at seven to eight and a half cents; the rise being nearly 100 per cent.

The rapid increase of this important item of the dairy at the west, is astonishing. Last year, the aggregate value of the amount that passed through the canals and the Hudson river, was over *one million and a half dollars.*

We gather the following interesting statistics in relation to it from the Canal Office at Albany:

ARRIVED AT THE HUDSON RIVER,

1834	6,340,000	pounds.
1835	9,586,000	"
1836	14,060,000	"
1837	15,560,000	"
1838	13,810,000	"
1839	14,530,000	"
1840	18,820,000	"
1841	14,170,000	"
1842	19,004,000	"
1843	24,334,000	"
1844	26,674,500	"

The shipments to foreign nations has averaged for the last ten years, about 3,000,000 pounds annually. This went to forty-two countries. Within the two past years, the market in England has been gradually gaining, and there was exported there in

1843	2,253,416	pounds.
1844	5,000,000	" estimated.

The last accounts from Liverpool state, that the American cheese was driving that from Ireland out of the market. The West Indies and Cuba are our next largest foreign marts. China, it is supposed, will also be our customer—large quantities having been sent there as an experiment.

During the past winter, about 400,000 pounds have arrived at Albany, by railroad. Of this amount, not far from 100,000 pounds were sent from this city.

We notice, by the Cincinnati prices current, that it is scarce in that city at 7¼ cts., the marked having been mostly cleared by a New Orleans House, for a foreign market.

At the Port of Cincinnati, in the year 1844, there arrived the following amounts and value of cheese:

Cheese in boxes,	74,073—	2,590,000 pounds.
Cheese in casks,	2,968—	509,400 "
Total,		3,099,400 pounds.

This was sold at an average of five cents per pound, making about $155,000 for the article of cheese, which, when we look at it on the table, appears to be a small matter. About five millions of pounds are also transported on the Pennsylvania and Ohio canal, from the counties of Trumbull, Portage, Summit, &c., &c.

Cheese, then, is a very extensive article of trade, and it is a very important fact, that, the export of it to England *doubled the last year.* At the present prices, the export of cheese to England amounts to three hundred thousand dollars. This is quite an item in our accounts.—*Cin. Chron.*

A young buck, who belongs to the independent-drink-or-let-it-alone-just-as-I-please-without-signing-the-pledge fraternity, popped the question to a pretty girl of our acquaintance a short time since, who brought a still deeper blush to his always blushing countenance, by replying that as she had signed a pledge to neither drink nor traffic in ardent spirits, she did not feel at liberty to trafic herself off for a hogshead of brandy!

Water Nymph.

Allotments.—The average acreable products under the allotment system in England, for 1842, are said to have been as follows: Potatoes 413 bushels, wheat 43¾ bushels, barley 53¼ bushels, peas 45 bushels, beans 56¾ bushels.

The Chief Quality Required in a Soldier.—It is health of body—physical strength, that enables man to endure the hardship of the tented field. It is the good condition of the animal that enables him to fight. We need mere machines for the ranks of the army. To obey is the only duty. Forward is the command. Sufficient intellect to load and fire a musket is all that is wanted: the number killed is the test of merit. A well trained horse is often more valuable than a score of men with souls!—*Adv. of Peace.*

A Simple Rule.—To ascertain the length of the day and night at any time of the year—double the time of the sun's rising, which gives the length of the night, and double the time of setting, which gives the length of the day.